

CLAIMS

1. A method for the treatment of alcohol dependence in humans comprising administering by mouth to an alcohol dependent subject, a dietary supplement comprising nutritionally effective amounts of monomeric, oligomeric and/or polymeric forms of acetylated mannose, gum ghatti, gum tragacanth, glucosamine, corn starch and arabinogalactan wherein at least a portion of the acetylated mannose, gum ghatti, gum tragacanth, and corn starch are predigested from oligosaccharides into monosaccharides prior to administration to the alcohol dependent subject.
2. A method for the reduction of undesired side effects in humans receiving a biologically effective agent that causes side effects comprising administering by mouth to a subject receiving a biologically effective agent that causes side effects, a dietary supplement comprising nutritionally effective amounts of monomeric, oligomeric and/or polymeric forms of acetylated mannose, gum ghatti, gum tragacanth, glucosamine, corn starch and arabinogalactan, wherein the acetylated mannose, gum ghatti, gum tragacanth, and corn starch are predigested prior to administration to the subject.
3. A method for producing correctly structured and properly functioning glycoproteins and/or glycolipids in a human comprising administering to a subject a dietary supplement comprising a nutritionally effective amount of at least one saccharide, in monomeric, oligomeric or polymeric form selected from the group consisting of galactose, glucose, mannose, N-acetylneuraminic acid, fucose, N-acetylgalactosamine, N-acetylglucosamine, xylose, arabinose, glucuronic acid, galacturonic acid, iduronic acid, arabinogalactan, acetylated mannose, glucosamine and galactosamine.
4. The method of claim 3, wherein prior to administration, the oligomeric or polymeric forms of the saccharides are predigested into a mixture of mono and oligosaccharides.
5. The method of claim 4, wherein the predigestion is conducted by a digestion technique selected from physical digestion, chemical digestion and biological digestion.
6. The method of claim 5, wherein the physical digestion is conducted by shearing or ultrasound treatment.

7. The method of claim 5, wherein the chemical digestion is conducted by enzymatic digestion, acid hydrolysis or base hydrolysis.
8. The method of claim 5, wherein the biological digestion is conducted with microbes selected from the group consisting of bacteria, fungi and molds.
9. A method for producing correctly structured and properly functioning glycoproteins and/or glycolipids in a human comprising administering to a subject a dietary supplement comprising nutritionally effective amounts of a composition comprising 10 weight percent acetylated mannose, 10 weight percent gum ghatti, 10 weight percent gum tragacanth, 10 weight percent glucosamine, 12 weight percent corn starch and 48 weight percent arabinogalactan wherein the acetylated mannose, gum ghatti, gum tragacanth, glucosamine, corn starch and arabinogalactan are in monomeric, oligomeric and/or polymeric forms for administration to the subject.
10. The method of claim 9, wherein the dietary supplement is administered to the subject by mouth in the form of a capsule, wherein the capsule is a size 1 capsule having a fill weight of 250 mg and the subject is administered from one to twelve of the capsules per day.
11. A method of providing a host in need of essential saccharides with a dietary supplement composition, comprising:
 - mixing into a single dose a dietary supplement composition comprising:
 - a nutritionally effective amount of an acetylated mannose;
 - a nutritionally effective amount of a first essential saccharide source selected from gum ghatti, gum tragacanth, glucosamine, corn starch and arabinogalactan; and
 - a nutritionally effective amount of a second essential saccharide selected from galactose, glucose, mannose, xylose, fucose, arabinose, glucuronic acid, galacturonic acid and glucosamine.
12. A method of providing a subject with essential saccharides comprising:
administering a nutritionally effective amount of at least two saccharides to the subject in need thereof,

wherein at least one of the two saccharides is selected from a first group of saccharides consisting of: arabinogalactan, glucosamine, rhamnose and acetylated mannose; and

wherein at least one of the two saccharides is selected from a second group of saccharides consisting of: N-acetylneuraminic acid, fucose, N-acetylgalactosamine, N-acetylglucosamine, arabinose, glucuronic acid, galacturonic acid, iduronic acid, galactose, glucose, mannose and xylose.

13. A method for the promotion and maintenance of good health in humans comprising administering to a subject a composition comprising at least two monosaccharides selected from the group consisting of galactose, glucose, mannose, xylose, acetylated mannose, N-acetylneuraminic acid, fucose, N-acetylgalactosamine, N-acetylglucosamine, arabinose, glucuronic acid, galacturonic acid and iduronic acid in nutritionally effective amounts.

14. The method according to claim 13, wherein the composition is administered to a subject by an administration route selected from the mouth, irrigation, ophthalmic, otic, rectal, sublingual, transdermal, buccal, vaginal and dermal.

15. The method according to claim 13, wherein the composition is administered in a dosage form selected from the group consisting of a powder, a reconstitutable powder, a liquid-solid suspension, a liquid, a capsule, a tablet, a caplet, a chewable candy bar, a concentrate, drops, an elixir, an emulsion, a film, a gel, granules, chewing gum, a jelly, an oil, a paste, a pastille, a pellet, a suppository, a syrup, a chewable gelatin and a chewable tablet.

16. The method according to claim 13, wherein an appropriate dose of the composition is determined by monitoring the subject's response to particular doses of the composition.

17. The method according to claim 13, wherein the subject's response is determined by monitoring one or more of the subject's energy level, stiffness, pain, discomfort, restful sleep, recovery from fatigue and emotional status.

18. A method for the treatment of alcohol dependence in humans comprising administering by mouth to an alcohol dependent subject, a dietary supplement comprising nutritionally

effective amounts of monomeric, oligomeric and/or polymeric forms of acetylated mannose, gum ghatti, gum tragacanth, glucosamine, corn starch and arabinogalactan.

19. A method for the reduction of undesired side effects in humans receiving a biologically effective agent that causes side effects comprising administering by mouth to a subject receiving a biologically effective agent that causes side effects, a dietary supplement comprising nutritionally effective amounts of monomeric, oligomeric and/or polymeric forms of acetylated mannose, gum ghatti, gum tragacanth, glucosamine, corn starch and arabinogalactan.
20. A method for producing correctly structured and properly functioning glycoproteins and/or glycolipids in a human comprising administering to a subject a dietary supplement comprising a nutritionally effective amount of six saccharides, in monomeric, oligomeric or polymeric form selected from the group consisting of galactose, glucose, mannose, N-acetylneuraminic acid, fucose, N-acetylgalactosamine, N-acetylglucosamine, xylose, arabinose, glucuronic acid, galacturonic acid, iduronic acid, arabinogalactan, acetylated mannose, glucosamine and galactosamine.
21. A method according to claim 20, wherein prior to administration, the oligomeric or polymeric forms of the saccharides are predigested.
22. A method according to claim 21, wherein the predigestion is conducted by a digestion technique selected from physical digestion, chemical digestion and biological digestion.
23. A method according to claim 22, wherein the physical digestion is conducted by shearing or ultrasound treatment.
24. A method according to claim 22, wherein the chemical digestion is conducted by enzymatic digestion, acid hydrolysis or base hydrolysis.
25. A method according to claim 22, wherein the biological digestion is conducted with microbes selected from the group consisting of bacteria, fungi and molds.
26. A method for producing correctly structured and properly functioning glycoproteins and/or glycolipids in a human comprising administering by mouth to a subject a dietary

supplement comprising nutritionally effective amounts of a composition comprising 10 weight percent acetylated mannose, 10 weight percent gum ghatti, 10 weight percent gum tragacanth, 10 weight percent glucosamine, 12 weight percent corn starch and 48 weight percent arabinogalactan wherein the acetylated mannose, gum ghatti, gum tragacanth, glucosamine, corn starch and arabinogalactan are present in monomeric, oligomeric and/or polymeric forms and are predigested prior to administration to the subject.

27. A method according to claim 26, wherein the dietary supplement is administered to the subject by mouth in the form of a capsule, wherein the capsule is a size 1 capsule having a fill weight of 250 mg. and the subject is administered from one to twelve of the capsules per day.
28. A method for treating or preventing reduced glyconutrient levels of at least one essential saccharide by periodically administering orally a single formulation having between about 1 to about 25 weight percent of arabinogalactan, glucosamine, rhamnose and acetylated mannose.
29. The method of claim 28, wherein the formulation further comprises one or more saccharides selected from galactose, N-acetylneuraminic acid, fucose, N-acetylgalactosamine, N-acetylglucosamine and xylose.
30. The method of claim 28, wherein the formulation is powdered.
31. The method of claim 28, wherein the formulation is encapsulated.